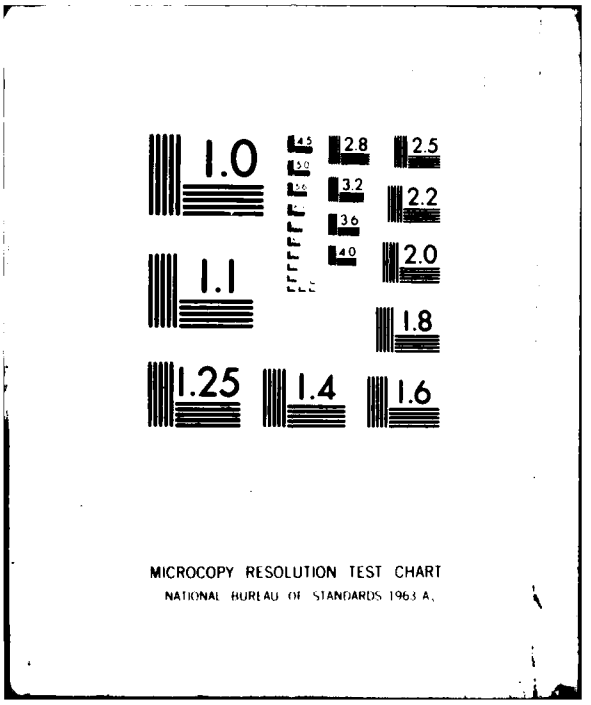
AD-A107 988 ARMY WAR COLL STRATEGIC STUDIES INST CARLISLE BARRACKS PA F/G 15/7
SOVIET THEATER NUCLEAR FORCES: IMPLICATIONS FOR NATO DEFENSE.(U)
SEP 81 R KENNEDY

UNCLASSIFIED NL

END
DATE FILMED
1 82
DTIC


1.0
1.1
1.25
1.4
1.6
1.8
2.0
2.2
2.5
2.8
3.2
3.6
4.0
4.5
5.0
MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS 1963 A.

LEVEL II (2)

STRATEGIC STUDIES INSTITUTE
US ARMY WAR COLLEGE
CARLISLE BARRACKS, PENNSYLVANIA 17013

1 SEPTEMBER 1981

ACN 81053

SOVIET THEATER NUCLEAR FORCES: IMPLICATIONS FOR NATO DEFENSE

STRATEGIC ISSUES RESEARCH MEMORANDUM

ISSN 0276-2872

STRATEGIC STUDIES INSTITUTE
US ARMY WAR COLLEGE
Carlisle Barracks, Pennsylvania

SOVIET THEATER NUCLEAR FORCES: IMPLICATIONS FOR NATO DEFENSE

by

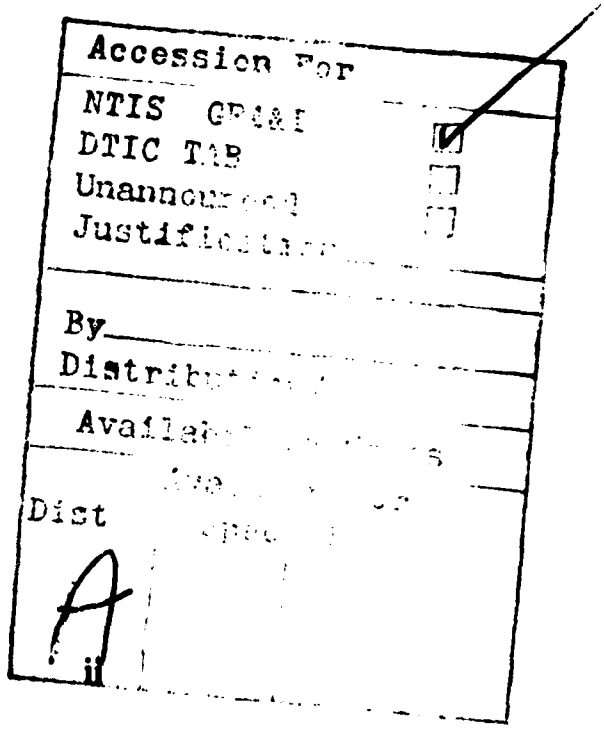
Robert Kennedy

1 September 1981

DISCLAIMER

The views of the author do not purport to reflect the positions of the Department of the Army or the Department of Defense.

Composition of this memorandum was accomplished by Mrs. Karen K. Bailey.

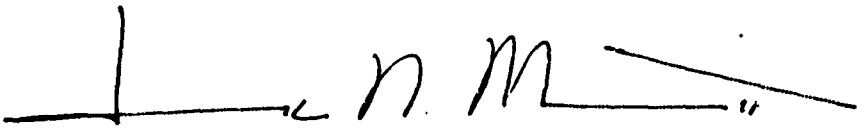


FOREWORD

This memorandum examines the nature of the Soviet theater nuclear force improvements, the role nuclear weapons play in Soviet doctrine, and the implications of the Soviet theater nuclear buildup for deterrence and defense in Europe. The author concludes that the changing balance of theater nuclear capabilities has resulted in a devaluation of the Western nuclear deterrent, a decline in Western self-confidence, and increase in the vulnerability of the West's nuclear forces and critical command, control and supply nodes. In response, the author contends that the West must shift the emphasis of its nuclear capabilities from short-range, battlefield systems to long-range, Eurostrategic systems, modernize its short-range systems through the introduction of reduced blast/enhanced radiation weapons, and optimize its training, doctrine, force structures, and force dispositions for operations in a nuclear as well as conventional and chemical environments.

The Strategic Issues Research Memoranda program of the Strategic Studies Institute, US Army War College, provides a means for timely dissemination of analytical papers which are not constrained by format or conformity with institutional policy. These memoranda are prepared on subjects of current importance in strategic areas related to the authors' professional work.

This memorandum was prepared as a contribution to the field of national security research and study. As such, it does not reflect the official view of the College, the Department of the Army, or the Department of Defense.



JACK N. MERRITT
Major General, USA
Commandant

BIOGRAPHICAL SKETCH OF THE AUTHOR

DR. ROBERT KENNEDY joined the Strategic Studies Institute in 1974. A graduate of the US Air Force Academy, Dr. Kennedy completed his graduate work in political science at Georgetown University. Dr. Kennedy served on active duty briefly with the Army and then with the Air Force from 1958 to 1971 and is currently a reserve officer with the Air National Guard. Prior to his present position, he was foreign affairs officer, US Arms Control and Disarmament Agency.

SUMMARY

Since World War II the principal focus of Western defense policies has centered on efforts designed to offset the preponderance of Soviet conventional power on the continent of Europe. To this end, NATO has generally relied on US strategic and theater nuclear superiority. Through improvements in their strategic force capabilities during the past decade, however, the Soviets have been able to neutralize the Western advantage at the strategic level. Today, the methodical improvement of Soviet theater nuclear capabilities portends a serious shift in the balance of military capabilities between NATO and the Warsaw Pact. Moreover, Soviet theater nuclear capabilities complement and are complemented by Soviet military doctrine. From the Soviet perspective, nuclear weapons enhance the importance of the two cornerstones of Soviet doctrine, surprise and rapid offensive operations, which in turn enhance synergistically the value of nuclear weapons.

By way of contrast, the United States and its Western Allies continue to focus on conventional forces and planning for conventional conflict. This difference in approaches has resulted in a devaluation of the Western deterrent, a decline in Western self-confidence, and an increase in the vulnerability of the West's nuclear forces, critical command and control nodes, and transportation and resupply nets.

To keep pace with changing environments in Europe, the United States and its NATO allies must now undertake a thorough review of Western doctrine and force postures in order to insure that NATO is capable of deterring and defending against Soviet theater nuclear as well as conventional and chemical offensives. To this end, three broad courses of action are indicated. First, NATO must shift the emphasis of its nuclear capabilities from short-range, battlefield systems to long-range Eurostrategic systems. Second, while de-emphasizing battlefield nuclear capabilities, NATO must modernize those capabilities to meet the political and military requirements of deterrence and defense. Finally, given the realities of the changing Soviet threat, NATO must optimize its training, doctrine, force structures and force dispositions for operations in a theater nuclear as well as conventional and chemical environments.

SOVIET THEATER NUCLEAR FORCES: IMPLICATIONS FOR NATO DEFENSE

Since World War II the principal focus of Western defense policies has centered on efforts designed to offset the preponderance of Soviet conventional power on the continent of Europe. To this end, NATO, over the years, has generally relied on US strategic and theater nuclear superiority to bring balance to the military equation in Europe. In a landmark speech delivered in London at the International Institute for Strategic Studies in October 1977, however, Helmut Schmidt, mindful of improving Soviet strategic and theater nuclear capabilities, expressed his concern over the changing strategic conditions which now confront the Alliance. According to Schmidt, SALT had codified the Soviet-American strategic nuclear balance thus neutralizing the strategic nuclear capabilities of the superpowers. As a result he cautioned, the significance of the East-West balance of tactical nuclear and conventional weapons had been magnified.

The Federal German Chancellor went on to suggest that while the Soviets had apparently accepted parity at the strategic level, they had given no clear indication of a willingness to accept the principle of parity for Europe. In fact, he argued ". . . the Warsaw

Pact has, if anything, increased the disparities in both conventional and tactical nuclear forces."[1] Since European and American defense specialists have long been aware of what has generally been perceived as a clear Soviet conventional advantage, Schmidt's remarks focused public attention on a series of issues which were already commanding high level NATO interest and thus sparked an intensification of the debate over the nature of the Soviet theater nuclear buildup, over the implications of that buildup for deterrence and defense, and over appropriate NATO responses.

SOVIET THEATER NUCLEAR FORCE IMPROVEMENTS

During the last decade NATO has signaled a willingness to reduce the number of nuclear weapons systems and warheads in the European theater and indeed during talks on the Mutual and Balanced Force Reductions in Europe (MBFR) offered an option which included a reduction in theater nuclear forces and weapons. In contrast, the Soviet Union has been methodically improving its theater nuclear forces at all levels.

Tactical/Battlefield Systems (Rx ≤ 100 NM). On the tactical or battlefield level, NATO once possessed an overwhelming superiority in nuclear weapons systems and warheads. In some quarters that superiority has been considered one of the primary pillars in the deterrence of the overwhelmingly superior Soviet conventional forces. Today, the Warsaw Pact has over 600 FROG and SCUD A missiles of which over 400 can be considered to have a nuclear mission. Moreover, they are now replacing their older FROG rockets with the SS-21. While little data is currently available on the SS-21, it is reported to have a considerably greater range than the FROGs and presumedly has incorporated improvements in reaction time, missile reliability, accuracy, and handling characteristics.[2]

The Soviet Union is also now deploying dual capable 203 mm[3] and 240 mm artillery. According to the Secretary of Defense, nuclear capable artillery are currently only deployed in the Soviet Union.[4] However, Soviet nuclear artillery could easily be moved to support nuclear operations against NATO.

While NATO still retains a relative overall advantage in short range systems and warheads as a result of a substantial deployment of nuclear artillery, the gap between NATO and Warsaw Pact battlefield capabilities has narrowed considerably over the past

decade and a half and the overwhelming superiority once enjoyed by NATO has disappeared (see Table 1).

Battlefield Support Systems (Rx = 101-500NM). The Soviet Union also has been upgrading its medium-range battlefield support systems. Currently the Soviets have deployed approximately 515 battlefield support missiles and nearly 380 tactical aircraft, and are capable of delivering over 860 nuclear weapons with such systems. Moreover, they are now replacing their liquid propelled SCUD B and SS-12 Scaleboard missiles with SS-

TABLE 1

TACTICAL/BATTLEFIELD NUCLEAR SYSTEMS

WARSAW PACT

Artillery

Type	Deployed	PNM	Rx	WHt	WHa
203 mm	n.a.	(150)	16	300	270
240 mm	n.a.	(150)	n.a.	300	270
TOTALS		300		600	540

Tactical Missiles

Type	Deployed	PNM	Rx	WHt	WHa
FROG/ SS-21	375	250	40/60	250	200
SCUD A	251	168	45	168	134
TOTALS	626	418		418	334

NATO

Artillery

Type	Deployed	PNM	Rx	WHt	WHa
155 mm	1081	540	10	1081	973
203 mm	319	160	11	319	287
TOTALS	1400	700		1400	1260

Tactical Missiles

Type	Deployed	PNM	Rx	WHt	WHa
Lance	90	90	60	90	81
H.J.	91	91	20	91	64
Pluton	30	30	65	30	24
TOTALS	211	211		211	169

SOURCE: Derived from data appearing in the Department of Defense Annual Report, Fiscal Year 1981; The Military Balance, 1980-1981; and Air Vice-Marshal Stewart W. B. Menaul, "The Shifting Theater Nuclear Balance in Europe," Strategic Review, Vol. VI (4), Fall 1978, pp. 34-45.

KEY: Tactical/Battlefield Nuclear Systems: Those systems with a range $\leq$ 100 NM.

Warsaw Pact: includes all systems in Eastern Europe including those in the western military districts of the Soviet Union.

NATO: includes systems currently assigned or earmarked for the European Theater.

Soviet Artillery: The Secretary of Defense has indicated that some of the 203 mm and 240 mm pieces now deployed by the USSR, have been adapted to fire nuclear projectiles. Air Vice-Marshal Menaul has estimated that the Soviet Union now has 150 203 mm guns/howitzers with a nuclear capability. It is reasonable to assume that as a minimum the Soviets have deployed at least as many 240 mm guns/howitzers. See figures in parentheses.

PNM: Probable number having a nuclear mission.

Rx: Approximate maximum range in nautical miles.

WHt: Total warheads estimated to be available in peacetime.

WHa: Warheads assumed to be available for delivery on wartime targets given probable system in commission rates. For artillery and Lance missiles, the general wartime availability factor is assessed at 0.9. For Honest John (HJ) the factor has been assessed at 0.7. All other systems are assessed at 0.8.

TABLE 2

MEDIUM-RANGE BATTLEFIELD SUPPORT SYSTEMS

WARSAW PACT

Battlefield Support Missiles

Type	No. Deployed	PNM	Rx	WHt	WHa
SCUD B/SSX-23	506	506	160	506	455
SS-12/SS-22			490		
SS-N-4	9	9	200	9	6
TOTALS	515	515		515	461

Tactical Aircraft

Type	No. Deployed	PNM	Rx	WHt	WHa
Su-7 (Fitter A)	239	60	390	60	48
Su-17(Fitter C/D)	480	120	390	240	192
Su-20(Fitter C)	35	9	390	18	14
Mig-21 (Fishbed J,K,L,N)	750	188	260	188	150
TOTALS	1504	377		506	404

NATO

Battlefield Support Missiles

Type	No. Deployed	PNM	Rx	WHt	WHa
Pershing I	180	180	390	180	162

Tactical Aircraft

Type	No. Deployed	PNM	Rx	WHt	WHa
Jaguar	219	73	465	73	58
Etendard	36	18	390	36	29
TOTALS	255	91		109	87

SOURCE: Derived from data appearing in the Department of Defense Annual Report, Fiscal Year 1981; The Military Balance, 1980-1981; and Jane's All the World's Aircraft, 1979-1980.

KEY: Medium-Range Battlefield Support Systems: Those systems with a range of 101 NM to 500 NM.

PNM, Rx, WHt, and WHa: See Table 1. A general availability factor of 0.9 was used to determine WHa for all battlefield support missile systems except the SS-N-4 (SARK). A factor of 0.7 was used for SARK. The factor used for tactical aircraft was 0.8. It was assumed that 1/4 of all Warsaw Pact tactical aircraft, 1/3 of the Jaguars and 1/2 of the Etendards would be retained in a nuclear role. It was also assumed that two warheads would be available for all Fitter C & D, and Etendard aircraft. One warhead for each of those that remain. The range estimates (Rx) for tactical aircraft are the greater of the ranges indicated in the above mentioned source documents assuming a hi-lo-hi combat mission profile. The Fitter C/D range was adjusted for a lighter bomb load than indicated in Jane's and for the addition of external fuel tanks.

23's and SS-22's and are rapidly improving the nuclear strike capabilities of their tactical air systems. The addition of the Fitter C's and D's and later versions of the MIG 21 aircraft with improved avionics and generally greater ranges than the older Soviet fighters suggests an improved capacity for low altitude penetration and attack.

In comparison NATO fields 180 Pershing I missiles, approximately 255 medium-range battlefield support aircraft (of which only about 90 are likely to be reserved for nuclear missions), and about 290 nuclear warheads to support these systems. Such a comparison suggests a stark imbalance in medium-range systems in favor of the Warsaw Pact (see Table 2). On the other hand, some of NATO's battlefield support requirements can be covered by

TABLE 3

EUROSTRATEGIC SYSTEMS

WARSAW PACT

Mid-Range Missiles (MR/SLBM's)

Type	No. Deployed	PNM	Rx	WHt	WHa
SS-4 (Sandal)	380	380	1000	380	342
SS-N-5 (Serb)	60	60	600	60	42
TOTALS	440	440		440	384

Intermediate Range Missiles (IR/SLBMs)

Type	No. Deployed	PNM	Rx	WHt	WHa
SS-5 (Skean)	45	54	2200	54	49
SS-20*	120	120	2700	360	324
TOTALS	174	174		414	373

Aircraft

Type	No. Deployed	PNM	Rx	WHt	WHa
SU-19(Fencer)	278	70	1000+	140	112
Mig 23/27 (Flogger B&D)	975	244	520	244	195
TU-16(Badger)	238	116	1800	464	372
TU-22(Blinder B)	94	47	1750+	94	75
TU-26(Backfire B)	54	27	2500+	108	82
TOTALS	1639	504		1050	836

NATO

Mid-Range Missiles (MR/SLBMs)

Type	No. Deployed	PNM	Rx	WHt	WHa
NONE	0	0	0	0	0

Intermediate Range Missiles (IR/SLBMs)

Type	No. Deployed	PNM	Rx	WHt	WHa
SSBS-S-2/3	18	18	1600	18	16
Polaris*	64	64	2500	48	43
MSBS M2/M20*	80	80	2000	64	58
Poseidon	40	40	2400	400	360
TOTALS	202	202		530	477

Aircraft

Type	No. Deployed	PNM	Rx	WHt	WHa
Vulcan B-2	56	56	2000	112	90
Buccaneer	60	30	1000	60	48
Mirage IVA	33	33	1000	33	26
FB III	170	85	1000+	170	136
F-4	499	166	600	166	133
Mirage IIIE	105	30	650	30	24
F-104	318	106	500+	106	85
A-6	20	10	1000+	20	16
A-7	40	20	1000+	40	32
TOTALS	1301	536		737	590

AGGREGATE EUROSTRATEGIC CAPABILITIES

	No. Systems Deployed	PNM	WHt	WHa
NATO	1503	738	1267	1067
WP	2253	1118	1904	1593

SOURCE: Derived from data appearing in the Department of Defense Annual Report, Fiscal Year 1981; The Military Balance, 1980-1981; Jane's All the World's Aircraft, 1979-1980; and Jane's Weapon Systems, 1979-1980.

KEY: Eurostrategic Systems = systems with a maximum range of 501-4000+NM
Mid-Range Missiles (MR/SLBMs) = systems with a maximum range of 1500-4000+NM

PNM, Rx, WHT, and WHa: See Table 1. A general availability factor of 0.9 was used to determine the warheads available (WHa) for Eurostrategic missions for ground launched missiles, 0.7 for Soviet SSBNs, 0.9 for NATO SSBNs, and 0.8 for all aircraft. The ranges (Rx) listed for aircraft are the greater of the ranges listed in the source documents and assume a hi-lo-hi combat mission profile.

NOTES* 1. It is assumed that 60 SS-20 missile launchers are deployed in the European theater, with one reload available per launcher and three MIRVs per missile.
2. It is assumed that two British Polaris and three French submarines are on patrol during peacetime and that one additional submarine each could be readied by the British and French in a crisis.

tactical air assets drawn from those which because of their range are considered Eurostrategic (Table 3). However, tactical air assets so employed would reduce the total number of nuclear strikes likely to be available against Eurostrategic targets.

Eurostrategic Systems (Rx = 501-4000 NM). Perhaps most significant, especially for US European allies, is the slow but methodical change in the balance of nuclear capabilities which is taking place at the Eurostrategic level. In the mid and late 1960's it was generally assumed that the West had a clear advantage in systems which have recently come to be called Eurostrategic. US Polaris submarines committed to SACEUR, NATO medium-range strike aircraft deployed on the continent or stationed offshore on carriers, the British bomber and Polaris submarine fleets, and the French Mirage IVA strike aircraft and their expanding ballistic missile submarine fleet were considered a more than adequate match for the medium bombers and the 750 or sc MRBMs and IRBMs the Soviets had deployed to support long-range nuclear operations in Europe.

During the last decade and a half, however, the Soviets have made a determined effort to offset Western capabilities. With the introduction of the Fencer and Flogger type aircraft, the Soviet Union has substantially improved the range, payload, avionics, and ECM capabilities of its European nuclear strike air arm. Admiral Thomas H. Moorer, Chairman of the US Joint Chiefs of Staff, in early 1974 described the Fencer as "the first modern Soviet fighter to be developed specifically as a fighter-bomber." Its two-man crew (pilot and weapons system operator) suggests an increased abiity to conduct night, all weather, low altitude, precision nuclear missions into the heart of Western Europe. *Jane's* places the Fencer, which entered squadron service in 1974, in the same class as the USAF F-111. Today the Soviets have deployed over 1200 Fencer and Flogger B&D aircraft in the European theater.

Coupled with continued improvements in their high performance fighter aircraft, the Soviet Union has also begun deploying a new generation, variable-geometry, supersonic bomber known in the West by the NATO code name "Backfire." Manufactured by Tupolev, the Backfire is reported to have a maximum speed at high altitude of Mach 2.5 and an "on the deck" supersonic penetration capability. It can carry a full range of free-fall/gravity weapons as well as the most technically advanced air-to-surface nuclear cruise missiles available in the Soviet inventory.[5] To date the Soviets have deployed approximately 54 Backfire bombers to the European theater. However, the Soviet Union is reported to be producing the Backfire at a rate of 30 aircraft per year with an expected deployment of up to 300 aircraft.

Of the new generations of systems currently being deployed by the Soviet Union in Europe, however, none has created as much concern and controversy as has the deployment of the SS-20 IRBM. The SS-20 is a solid-fueled, two-stage, MIRVed, mobile missile which is currently replacing or supplementing the older, less accurate, less reliable SS-4's and SS-5's. One former senior Department of Defense civilian official now writing under the name Justin Galen has noted that the reliability, accuracy, reload, and retargeting capability of the SS-20, should permit its use ". . . effectively in first strike, launch-on-warning, or second-strike attacks." Furthermore, he contends that with the deployment of the SS-20, the Soviet Union ". . . could probably launch a reliable mass strike with such systems against virtually every NATO air base, weapons storage site, C^3 (command, control, and communications) site, and fixed missile site with negligible warning."[6] A more pointed illustration of the concern which has been raised by the SS-20 is the remarks made by French strategist Pierre Gallois. Gallois has suggested that with the addition of the SS-20 the Soviet Union can now destroy NATO's entire inventory of nuclear weapons in 10 minutes.[7]

As a result of such improvements, today the Soviet Union fields a formidable array of Eurostrategic capabilities. They currently have deployed over 600 MR/IRBMs and SLBMs, about 500 nuclear capable aircraft, and over 1900 warheads to support theater-wide nuclear operations. In comparison the West (including French theater forces) has deployed approximately 200 IR/SLBM's, 540 tactical/strike aircraft, and 1270 warheads to support theater level nuclear operations. (see Table 3).

In Sum. The inherent "softness" of the data available on Soviet and Western nuclear capabilities make precise measurements of the balance captive of the many assumptions that have been made. Nevertheless, given the data at hand, the composite of theater nuclear capabilities now available to the Soviet Union suggests that the NATO/Warsaw Pact balance of nuclear forces has shifted from one which once favored the West to one that now *appears* to favor the Soviet Union and its Warsaw Pact allies. While the West may retain an advantage at the tactical/battlefield level, the Soviets are clearly ahead in medium-range systems, and now have what appears to be an aggregate numerical advantage in Eurostrategic systems. Moreover, with the addition of Fencer, Flogger, and Backfire type aircraft and SS-20 IRBMs, the technological

superiority which was once thought to clearly favor NATO is now being seriously challenged.

This is not to suggest that the Soviet Union has as of yet achieved any meaningful overall quantitative or qualitative theater nuclear superiority. However, the data does support the contention that, at best, a kind of rough parity exists at the theater nuclear level. Furthermore, trends suggest that the USSR has not decided to limit or reduce its efforts in the field of theater nuclear forces. On the contrary, the continued improvement of Soviet theater nuclear capabilities portend an increased nuclear threat to the West.

SOVIET DOCTRINE

The Emphasis on Surprise and Offense. Soviet theater nuclear force improvements complement and are complemented by Soviet doctrine. Since the Khrushchev period Soviet military writers have rejected the idea of adopting the strategic defense during the first phases of a conflict, as had been done under Stalin in the early part of World War II.[8] Today Soviet doctrine focuses on surprise and rapid offensive warfare. In this regard, the Soviet writers contend that the Soviet emphasis on offensive warfare has nothing in common with the "aggressive and predatory content" of Western military doctrine.[9] Nevertheless, the Soviets have increasingly emphasized the importance of strategic and tactical surprise and rapid offensive combat operations as vital prescriptions for success should conflict occur.

While Soviet military writings do not support the notion that Soviets would launch a "bolt out of the blue,"[10] surprise is viewed as one of the most important principles of military art. Colonel Vasiliy Ye.Savkin, in one of the early and basic books of the "Officers Library" series published by the Military Publishing House in Moscow and recommended for all officers and students in higher military schools, has written:

> The first law of war is that the course and outcome of war . . . depends primarily on the correlation of available, strictly military forces of the combatants at the beginning of the war . . . the beginning of a war can have a decisive effect on the outcome."[11]

According to Savkin:

> From this law come a number of the most important principles of military art, including the principle of surprise. . . .[12] Surprise has been a most important principle of military art since olden times.[13]

As a result, he contends:

> The desire for surprise has begun to permeate all decisions for the conduct of operations and battles.[14]

In another major work in the same series, Colonel A.A. Sidorenko has contended that the history of conflict itself has emphasized the value of surprise. He noted: "Extremely often the absence of surprise turned out to be the reason for the failure of an operation at its very beginning."[15]

Equally stressed by Soviet military theorists is the importance of rapid offensive combat operations. Indeed, Soviet military science considers the offensive as the main type of military combat action. Savkin writes:

> . . . the offensive is the basic form of combat actions, since only by a decisive offensive conducted at a high tempo and to a great depth is total defeat of the enemy achieved.[16]

Similarly, Sidorenko in his seminal work on offensive warfare stressed the need for the ". . . swift development of the breakthrough," the value of a rapid ". . . offensive in depth," the importance of night operations in ". . . striving to attain surprise and continuity in the offensive," the contribution of airborne and amphibious forces to increased attack rates and ultimately to ". . . the successful conduct of offensive operations," and in general the importance of maneuver and shock action on the modern battlefield.[17] Likewise, Division Commander Colonel Lobachev has argued:

> A high tempo is not a goal in itself, but a means to achieving victory in combat. The speed of movement of the attackers denies the enemy the opportunity to freely maneuver with his forces and equipment, to utilize the reserve . . . and it neutralizes many of the strengths of the enemy defense.[18]

The Role of Nuclear Weapons. From the Soviet perspective, nuclear weapons enhance the importance of surprise and rapid offensive operations which in turn, synergistically, enhance the

value of nuclear weapons in securing victory. In describing the relationship between nuclear warfare and Soviet doctrine and defense planning, Soviet writers have proclaimed the nuclear weapon as the "most important element of the battlefield," "the basic means of destruction." They suggest that ". . . the side which employs nuclear weapons with surprise can predetermine the outcome of battle in his favor." The late Minister of Defense Marshal Andrey Antonovich Grechko has written: "Nuclear missiles will be the decisive means of armed conflict."[19] Likewise, Major-General V.V. Voznenko has concluded that "Decisive victory in an offensive is achieved by using the results of nuclear strikes. . ."[20]

Concerning the synergistic relationship between nuclear weapons and rapid offensive warfare, Soviet writers contend that the high combat qualities of shock forces permit the exploitation of

> . . . the results of the employment of nuclear and other means of mass destruction [read chemical] most effectively, overcoming the enemy's defense at a high rate, breaking through into his deep rear swiftly, advancing over any terrain including that contaminated with radioactive substances, and inflicting powerful blows on the enemy.[21]

They maintain that "Nuclear weapons creates an opportunity to quickly alter . . . the balance of forces of the sides . . ." and that "the high maneuverability and dynamism of warfare . . . [are] a result of equipping the troops with nuclear weapons and their complete motorization." They believe that "Nuclear weapons make it possible in the shortest period of time to cause great losses to the defending side, and to create breaches in its battle formations." They contend that "nuclear strikes can destroy the strongest centers and strong points in the enemy defense, his reserves, means of mass destruction, and other important objectives." As a result, Soviet military writers have concluded that through ". . . the stunning effect of surprise attacks by nuclear and conventional weapons and decisive offensive operations by troops, the enemy's capabilities are sharply lowered, . . . the correlation of forces changes immediately. . . He may panic and his morale will be crushed."[22]

Thus, while there are many reasons the Soviet Union would seek to avoid conflict in Europe, especially nuclear conflict, their doctrine and the forces they have been methodically building, suggest that: (1) they believe that *should* war occur in Europe it is

likely to involve the use of nuclear weapons, (2) they intend to be prepared for such a war should it occur, and (3) they believe that in conjunction with surprise and rapid offensive maneuver, the coordinated use of nuclear weapons will have a decisive effect on the outcome of the conflict.

IMPLICATIONS FOR NATO DEFENSE

A Devalued Deterrent. To be sure, Soviet theater nuclear force improvements have not neutralized the ability of the West to deter conflict in Europe. Moscow is likely to harbor few illusions about the destructive potential of the West's theater, as well as strategic, nuclear arsenal — which by any standards remain formidable. Thus, Soviet leaders are not likely to set out deliberately on a course which they believe might well lead to a nuclear exchange.

Nevertheless, in a broader sense, improvements in Soviet theater nuclear capabilities have resulted in a depreciation of the deterrent effect of the West's nuclear arsenal. From a Western perspective, the deterrence once provided by Western nuclear superiority was never simply limited to the notion of deterring the deliberate initiation of conflict. Rather, an effective deterrent was also viewed as one which served to limit Soviet policy options in time of crisis and thus prevent a slow slide to nuclear war based on mutual miscalculation. In theory, while Soviet leaders could be expected to test Western resolve in any number of ways, ultimately they would be deterred not only from the deliberate initiation of conflict, but also from specific actions which might lead to conflict and an ensuing escalation to levels at which they were at a clear relative disadvantage.

Today, in an age of strategic parity, the attainment by the Soviets of a rough equivalence at the theater nuclear level is likely to provide the Soviet Union with increased room for political maneuver in peacetime and during crisis. While Soviet leaders are basically conservative in outlook and well aware of the probable consequences of conflict in Europe, they are also keenly aware of Western European concerns over the potentially devastating effect of a nuclear war in Europe. In light of such concerns, Soviet leaders are now likely to believe that "sober" assessments by the West of the new balance of nuclear capabilties on the continent of Europe reduces the risk of war erupting from crises disputes. As a result,

Soviet leaders are likely to feel somewhat more confident that they can successfully engage in political coercion, crises bargaining, and bluff. Unfortunately, such confidence may well lead to more strident Soviet behavior, the concomitant potential for miscalculation, and ultimately to the very conflict all sides seek to avoid.

A Decline in Western Self-Confidence. Perhaps as significant as the potential for Soviet miscalculation during crises is the debilitating effect knowledge of that potential is likely to have on Western European elites during peacetime. In 1960 in an attempt to answer what he considered to be the fundamental question confronting the alliance as it fashioned defense policies and strategies in an age of nuclear weapons — namely, can the West defend Europe without destroying it? — Liddel Hart concluded:

> The answer — if we are honest, and brave enough to face hard facts — can only be that, in the present conditions, effective defense is not possible. For defense in a real sense of the word, as defined in dictionaries, means to "preserve, protect, keep safe, by resisting attack." At present if nuclear weapons . . . are actually used no country can hope to keep safe, or even to avoid fatal destruction.[21]

The continued Soviet buildup of theater nuclear weapons and their development of a doctrine which emphasizes the integrated use of nuclear, chemical, and conventional weapons in Europe underscores this dilemma. As a result, a growing number of European elites are understandably uncomfortable with the current situation, uncertain as to the nature of security provided through the NATO link, unhappy with the inability of the United States to provide a "quick fix" even though the complexities of the environment may not admit to quick fixes, and increasingly may be willing to seek accommodation (although they certainly would not call it that) with the Soviet Union. In some respects this is understandable and, as a way of exploring new alternatives for improving Western security, perhaps even beneficial. However, the dividing point between the constructive exploration of alternatives and condescension could well be difficult to clearly define, Thus, while the great subtleties of political maneuver have frequently taken place at this point, the hazards to the continued cohesion of NATO are great.

Increased Vulnerabilities. In 1971 Marshall Andrey Grechko detailed Soviet targeting priorities for their longer ranged theater

nuclear forces. Top on the priority list were US Pershing missile bases, nuclear-capable NATO air force units, tanker bases, British and French nuclear submarines, tactical nuclear weapons storage sites and US aircraft carriers. Such targets were then followed by major ports, military bases and barracks, nuclear reactors, command and control centers, and the transportation and supply net.[24] Thus, the West's nuclear forces and critical command, control, and supply nodes have been principal candidates for Soviet Attack for over a decade. However, the addition of the SS-20 IRBM and the continued deployment of new generation tactical fighter/bomber aircraft such as the Fencer and Backfire has significantly increased the vulnerability of Western defense capabilities.

The high accuracy of the SS-20 has reduced the number of warheads required to assure the destruction of a specific target, while the MIRVed warhead has substantially increased the potential number of targets that can be struck by a single missile. As a result, whereas in the past it would have been necessary for the Soviet Union to launch two, perhaps three, of their older SS-4 or SS-5 missiles in order to have a high confidence of destroying a specific target, thus rapidly exhausting their capabilities, today it is theoretically possible for the Soviets to destroy with slightly over 100 SS-20 missiles the same number of targets it would have taken their entire force of SS-4s and SS-5s to destroy.

Likewise, older generation aircraft frequently lacked the avionics, ECM, range, and payload characteristics which make the new generation fighter bombers, and Backfire type aircraft a serious threat to NATO's deep rear.

PLANNING FOR THE WRONG WAR

Despite dramatic improvements in Soviet theater nuclear capabilities and the corresponding development of a doctrine that focuses on the integrated use of nuclear, chemical and conventional capabilities should war occur in Europe, the US bias for conventional forces and conventional planning, which began during the Kennedy Administration, persists. That bias was an outgrowth of an increasing concern among Europeans[25] as well as Americans over the effects of a two-sided nuclear exchange in Europe which had been made possible as a result of the deployment

by the Soviets in the late 1950s and early 1960s of a sizeable theater nuclear capability. In light of Soviet deployment, the utility of a defense based on the near spasmodic nuclear response to a major Warsaw Pact conventional aggression which seemed to have characterized the era of "Massive Retaliation" was seriously questioned. Capturing the essential thrust of Alliance concerns at the time, General Andre Beaufre has written:

> . . . as the Soviet nuclear threat developed, it became increasingly difficult to believe that recourse to a "nuclear exchange" would be made for any reason other than the defense of absolutely vital objectives. It seemed wise, therefore, to anticipate a more or less extended period of resistance before unleashing "massive retaliation."[26]

In response to such concerns, the Kennedy Administration began to refocus its efforts on improving capabilities for defense at the conventional level. The doctrine which issued from a number of studies and pronouncements became known as the doctrine of "flexible response." In theory, old trip-wire forces would be replaced by forces more adequately prepared to meet a Soviet conventional thrust. This would give pause to the Soviets and permit them to reflect on the consequences of pursuing a conflict which might well escalate to levels at which they were at a clear relative disadvantage. Thus, Soviet conventional capabilities would be partially offset by an improved NATO conventional force posture. Moreover, through improvements in conventional force posture, the use of nuclear weapons might be forestalled, thus raising the nuclear threshold.

The practical effect, however, of this shift to a conventional emphasis strategy, was to all but eliminate serious thinking about the conduct of operations on a nuclear battlefield and the psychological effect on friend and foe alike of being fully prepared for such conflict should it occur. According to a study by John P. Rose, in the mid-1950s fifty percent of the instruction and training at the Army's Command and General Staff College (C&GSC) was devoted to theater nuclear conflict. In 1957-58, 614 Regular Course curriculum hours focused on the nuclear battlefield. Moreover, the weight of military writing during the period clearly indicated an emphasis on theater nuclear operations. In the eight-year period immediately preceding the Kennedy Administration's emphasis on conventional defense the Army's *Military Review* published 155

articles which dealt with theater nuclear warfare. In contrast, in the eight-year period from 1962 to 1969 only 26 articles were published by *Military Review* on the subject, and by the late 1960's C&GSC instruction on nuclear conflict had dropped to 16 hours.[27]

The continued improvement in Soviet strategic and theater nuclear capabilities over the last decade and a half has significantly altered the military environment on the continent of Europe. The United States and its NATO allies can no longer rely on an unquestioned Western nuclear superiority to deter all uses of nuclear weapons by the Soviets. As a result, the assumption that several hundred allied and Warsaw Pact divisions might engage in a conflict in Europe with neither side resorting to nuclear weapons is simply unrealistic. Yet, the US emphasis on conventional forces and planning for conventional conflict remains.

In part, this is no doubt the result of a recognition of a clear imbalance in favor of the Warsaw Pact in conventional weapons systems and force structures and a perceived need in some quarters to provide some relative balance of capabilities at all levels of potential conflict — especially as Soviet strategic and theater nuclear capabilities have improved. In part, the emphasis on conventional forces and planning may reflect the difficulty of planning for a nuclear war for which no previous conflict serves as a guide to potential requirements. In part, this emphasis may reflect the hope that the conventional nuclear "firebreak" would not be crossed. Almost certainly, the bias reflects a strong reluctance to broach a subject that has become extremely politically sensitive in Western Europe. On this latter point, Robert Lawrence has written:

> . . . there has been one possible kind of war that has been virtually impossible to discuss publicly in any reasoned and coherent manner. This is tactical nuclear war, the use of nuclear weapons for limited tactical military purposes, a subject that has taken on an almost leprous appearance and seems essentially unable to stir intellectual curiosity, let alone serious consideration by students, pundits, or policy makers.[28]

Likewise, General Maxwell Taylor has written:

> The thought of using any kind of nuclear weapons is so repugnant to civil authorities as to preclude virtually any serious discussion of the possibilities or conditions under which these weapons might be used.[29]

As a result of this reluctance to face seriously the possibility, indeed, given improved Soviet capabilities and the implications of Soviet doctrine, the probability that should war occur in Europe, it would involve the use of nuclear weapons, US/NATO defense posture has failed to keep pace with the changing political and military environment in Europe. It was fashioned at a time when NATO had a significant preponderance of nuclear capabilities. That preponderance has now disappeared. Yet when you strip the rhetoric from policy pronouncements and carefully examine NATO forces, doctrine, and training you are forced to conclude as William Van Cleave and Sam Cohen have that there is ". . . little more than confusion concerning the employment of tactical nuclear weapons."[30]

Today, strategic and theater nuclear parity mandates that the United States and its NATO allies be fully prepared for the full spectrum of conflict should war occur in Europe. Given Soviet capabilities and a Soviet doctrine that focuses on the intensive, coordinated use of nuclear as well as conventional and chemical munitions, what is now necessary is: (1) a thorough review of Alliance forces, doctrine, and posture with the intent of improving NATO's ability to deter, and if necessary, defend against a combined Soviet conventional, chemical, nuclear offensive; and (2) the development of a NATO deterrent and defense strategy which would increase the probability of deterring a Soviet nuclear pre-emption during a severe crisis.

IN RESPONSE

To the end of improving NATO's deterrent and defense posture, the following broad courses of action appear promising: First, NATO should shift the emphasis of its nuclear capabilities from short-range, battlefield systems to long range, Eurostratgegic systems. Today, the only area of nuclear deployments in which NATO has a clear advantage is at the battlefield level. Planned improvements in NATO's Eurostrategic capabilities through the addition of 572 cruise missiles and Pershing II are a step in the right direction — not simply as a response to Soviet deployments of the SS-20, but for the value of such long-range systems, as a deterrent in their own right. Deterrence depends on an adversary believing that the potential benefits of a conflict are outweighed by the costs.

While current battlefield systems, if used, would clearly reduce the probability of a successful Soviet combined arms offensive in Central Europe, the effects of their use threaten the destruction of Western Europe and thus have an adverse psychological impact on Western Europe during peacetime and raise questions as to whether the Alliance would ever authorize the release of such weapons in Europe, until perhaps it was already too late.

Acquisition, deployment, and employment policies which emphasize the use of long-range nuclear systems designed to attack Soviet forces, staging areas, command and control networks, and lines of communication in the Western districts of the Soviet Union and in Eastern Europe would place the Soviet Union and its Eastern European allies on clear notice that should the Soviets initiate a conflict in Europe, Warsaw Pact territories would not be spared from destruction — that NATO does not intend to limit damage to Western Europe but rather intends to take the conflict directly to the enemy. Thus, the credibility of the West's nuclear deterrent would be enhanced. It is simply more credible to threaten to attack Soviet forces in the western military districts of the Soviet Union and in Eastern Europe with nuclear weapons than it is to threaten to destroy Western Europe in order to save it from Soviet aggression. Moreover, such an approach would further enhance deterrence by increasing the precalculable costs of aggression to the Soviets, by increasing the reluctance of the Soviet Union's Eastern European allies to participate in conflict preparations during severe crises, and by reducing the Soviet planners confidence that a well-integrated coordinated joint Warsaw Pact attack can be orchestrated without providing the kind of advanced warning to NATO that might seriously reduce the effectiveness of the Soviet forces during the early critical stages of conflict.

Emphasis on long-range systems might also be psychologically encouraging to the nations of Western Europe. Such an emphasis is likely to enhance not diminish the linkage between theater nuclear conflict in Europe and the US strategic nuclear deterrent. Europeans might reason that a Western focus on battlefield systems suggests a willingness to engage in a war limited to Central, perhaps even just Western Europe. An emphasis on the use of Eurostrategic systems might well suggest to many Europeans an early US intent to take those measures necessary to thwart a Soviet takeover of Western Europe including nuclear strikes deep into the Soviet Union.

One principal concern, however, in emphasizing long-range systems is the impact of such a move on the arms race. A clear emphasis on Eurostrategic systems, however, need not result in a spiraling nuclear arms race in Europe. NATO need not increase the absolute numbers of its nuclear weapons or systems. Rather, NATO might, as it modernizes its forces, emphasize forces with a deep nuclear interdiction capability. No dramatic new programs need to be approved. Indeed, a subtle shift in emphasis is likely to better serve the politics of Western Europe. Moreover, efforts to cap the numbers of nuclear systems and warheads available to both sides should continue, and if undertaken in conjunction with efforts to achieve parity at all levels including the conventional level could well contribute to a more stable military relationship in Europe.

Second, while de-emphasizing battlefield nuclear capabilities, NATO should modernize those capabilities so that it is better able to meet the political and military requirements for deterrence or defense against a possible Soviet combined conventional, chemical, nuclear thrust. Current battlefield weapons, if employed in Western Europe, would result in high levels of collateral damage. Thus, they exacerbate the Western dilemma of how to save Europe without destroying it. On the other hand, while the West has no control over the size or warheads likely to be employed by the Soviet Union or over Soviet targeting policy, it could, through the introduction of reduced blast/enhanced radiation (RB/ER) weapons, reduce the absolute levels of collateral damage likely to be sustained through allied use of nuclear weapons. The controversy surrounding the planned introduction of the RB/ER weapon (the so-called neutron bomb) in the late 1970s makes it politically difficult for the United States or its Western European allies to open debate on the subject. Nevertheless, the facts remain and, in my opinion, should be confronted directly. A one-kiloton (KT) RB/ER weapon essentially produces the same desired military effects as a 10-KT standard fission weapon. However, its use could significantly reduce the number of unintended casualties and collateral damage outside the immediate target area (see Table 4). While current modernization programs for battlefield systems include improvements of warheads which offer the option for including RB/ER features with a relatively short lead time[31], in my opinion, failure to make the RB/ER features an integral part of the

TABLE 4

RADIUS OF EFFECTS (METERS)

Yield	Tank Crew Incapacitation From Radiation	Unprotected Casualties	Urban Destruction From Blast
1 KT ER	700	1000	400
10 KT Fission	700	1200	1200

SOURCE: S.T. Cohen and Brigadier General Edwin F. Black, "The Neutron Bomb and the Defense of NATO," Military Review, Vol. LXIII, May 1978, p. 59.

arsenal places an increased emphasis on the need for adequate warning and increases the burden on NATO decision-makers during severe crises by forcing them to make decisions concerning the incorporation of the RB/ER feature just at the time they are seeking to reduce tensions and avoid conflict.[32]

Finally, in my opinion, NATO must now give equal emphasis to nuclear as well as conventional planning for conflict in Europe. As a result of Soviet theater nuclear force improvements, NATO must be prepared to conduct operations not only on a purely conventional battlefield but also in a fully integrated conventional-chemical-nuclear environment. Training, doctrine, force structures and dispositions, approaches to the prepositioning of equipment, the time-phasing of reinforcing combat troops, support forces and equipment, etc. must now be optimized for operations in a nuclear as well as conventional environment. Such a posture would not run counter to NATO's primary goal of deterring conflict. Indeed, it would contribute to deterrence. Present force posture invites the Soviets to use nuclear weapons. As a result of nearly 20 years of conventional emphasis planning, NATO, today, is highly vulnerable to a Soviet nuclear attack. Speaking about Soviet incentives for early use of nuclear weapons, Jeffrey Record has argued, ". . . it would appear as if the Alliance has set out deliberately to tailor and deploy its forces so as to provide every conceivable incentive for the Soviet Union to strike first with nuclear weapons."[33] What is now necessary is not only an extension of current US/NATO efforts designed to reduce the vulnerabilities which have crept into our posture often as a result of our emphasis on planning for conventional conflict, but also a marked effort to train, equip, and deploy forces that are fully

prepared to meet and defeat a Soviet combined arms, conventional-chemical-nuclear offensive. Such a posture not only would enhance deterrence, but also would provide for an effective defense across the spectrum of conflict should deterrence fail.

ENDNOTES

1. Helmut Schmidt, "The 1977 Alastair Buchan Memorial Lecture," *Survival,* Vol. XIX, November-December 1977, pp. 3-4.

2. Both the FROG and SCUD A missiles were reported to have poor reaction times, low reliability, poor operational accuracy and a primitive manual interface with Soviet targeting and command and control systems. See John M. Collins and Anthony H. Cordesman, *Imbalance of Power: An Analysis of Shifting US-Soviet Military Strengths,* San Rafael, California: Presidio Press, 1978, p. 300.

3. There is some difference of opinion as to the exact calibre of this gun. The Secretary of Defense in his FY 81 Annual Report on defense posture refers to a 203 mm weapon as does the International Institute for Strategic Studies in *The Military Balance 1979-80.* On the other hand, *Jane's Weapons System 1979-80* notes that the exact calibre of the weapons known as the 203 mm M-1955 Field Howitzer became known after the Israelis captured some of these weapons in 1973. It was then established to be 180 mm.

4. Harold Brown, Secretary of Defense, *Department of Defense Annual Report Fiscal Year 1981,* Washington: January 29, 1980, p. 92.

5. See John W. R. Taylor, ed., *Jane's All The World's Aircraft 1978-79,* London: MacDonald and Jane's Publishers Limited, 1978, pp. 201-202.

6. Justin Galen, "The Nuclear Balance, Part One: Recent Force Trends and Improvements," *Armed Forces Journal International,* December 1977, p. 30.

7. See Joseph Fitchett, "NATO Arms Talks Test US-Europe Ties," *The International Herald Tribune,* April 30, 1979, p. 1.

8. See Thomas W. Wolfe, *Soviet Power and Europe 1949-1970,* Baltimore: The John Hopkins Press, 1979, p. 199.

9. See for example, Lt Colonel L. Korzun, "Defense in Modern Combat," *Krasnia zvezda [Red Star],* August 22, 1964.

10. See Joseph D. Douglass, *The Soviet Theatre Nuclear Offensive,* Washington: US Government Printing Office, 1976, pp. 3-4.

11. V. Ye. Savkin, *Operational Art and Tactics,* Moscow: Military Publishing House, 1972, p. 89.

12. *Ibid.,* p. 90.

13. *Ibid.,* p. 230.

14. *Ibid.,* p. 234.

15. Colonel A. A. Sidorenko, *The Offensive,* Moscow: Military Publishing House, 1970, p. 30.

16. Savkin, p. 248.

17. Sidorenko, pp. 11-39.

18. COL Lobachev, "A High Tempo of Attack — The Indispensible Condition for Victory," *Voyenni Vestnick [Military Herald]* Vol. V (2), February 1977, p. 44. Quoted in COL Frederick C. Turner, *Comments on FM 100-5 From A Soviet Point of View,* Carlisle Barracks, Pennsylvania: US Army War College, March 15, 1978, p. 19.

19. Andrey A. Grechko, *On Guard for Peace and the Building of Communism,* (Moscow, 1971), trans. Joint Publications Research Service, Springfield, Virginia: National Technical Information Service, 1972, p. 33.

20. Colonel-General N. A. Lomov, ed., *Scientific-Technical Progress and the Revolution in Military Affairs,* Moscow: Military Publishing House, 1973, p. 144.

21. Sidorenko, p. 46.

22. For example, see Sidorenko, pp. 40-70 and pp. 109-124; Savkin, pp. 232-233, and Lomov, pp. 40-41 and pp. 143-156.

23. B. H. Liddell Hart, *Deterrent or Defense,* New York: Frederick A. Praeger, 1960, p. 47.

24. Marshall A. Grechko, *On Guard for Peace and the Building of Communism,* quoted in Hubertus Hoffman, "SS-20 Multiples USSR's Nuclear Superiority," *NATO's Fifteen Nations,* December 1978 - January 1979, p. 44.

25. The Europeans had been sensitized to the potential impact on Western Europe of a defense based on the use of nuclear weapons by the SHAPE war game "Carte Blanche" which had been held in Western Germany, the lowlands, and north-eastern France in 1955. In that exercise the simulated use of 355 atomic bombs resulted in an estimated 5.2 million prompt casualties not to mention the residual casualties resulting from the impact of devastation and the long-term effects of nuclear radiation.

26. Andre Beaufre, *NATO and Europe,* New York: Alfred A. Knopf, 1966, pp. 57-58.

27. John P. Rose, Major, US Army. "US Army Doctrinal Developments: The Nuclear Battlefield, 1945-1977," PhD dissertation, University of Southern California, School of International Relations, Defense and Strategic Studies Program, 1977, Chapter 4. Quoted in William Van Cleave and S. T. Cohen, *Tactical Nuclear Weapons: An Examination of the Issues,* New York: Crane, Russak and Company, Inc., 1978, pp. 5-6.

28. Robert M. Lawrence, "On Tactical Nuclear War," *Revue Militaire Generale,* January 1971, p. 46.

29. General Maxwell D. Taylor, *Precarious Security,* New York: W. W. Norton and Co., Inc., 1976, p. 14.

30. Van Cleave and Cohen, p. 9.

31. See Brown, *DOD Annual Report FY 81,* p. 146.

32. For a further discussion of the author's views of the pros and cons of the RB/ER debate, see Robert Kennedy, "New Weapons Technologies: Implications for Defense Policy," *Parameters,* Vol. IX, June 1979, pp. 67-68.

33. Jeffrey Record, "Theater Nuclear Weapons: Begging the Soviet Union to Preempt," *Survival,* Vol. XIX (5), September-October 1977, p. 208.

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE	READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER: ACN 81053	2. GOVT ACCESSION NO.: AD-A107988
3. RECIPIENT'S CATALOG NUMBER	
4. TITLE (and Subtitle): SOVIET THEATER NUCLEAR FORCES: IMPLICATIONS FOR NATO DEFENSE	5. TYPE OF REPORT & PERIOD COVERED: Strategic Issues Research Memoranda
	6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s): Dr. Robert Kennedy	8. CONTRACT OR GRANT NUMBER(s)
9. PERFORMING ORGANIZATION NAME AND ADDRESS: Strategic Studies Institute, US Army War College, Carlisle Barracks, PA 17013	10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
11. CONTROLLING OFFICE NAME AND ADDRESS	12. REPORT DATE: 1 September 1981
	13. NUMBER OF PAGES: 27
14. MONITORING AGENCY NAME & ADDRESS(if different from Controlling Office)	15. SECURITY CLASS. (of this report): UNCLASSIFIED
	15a. DECLASSIFICATION/DOWNGRADING SCHEDULE

16. DISTRIBUTION STATEMENT (of this Report)

Approved for public release; distribution unlimited.

17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)

18. SUPPLEMENTARY NOTES

19. KEY WORDS (Continue on reverse side if necessary and identify by block number)

Soviet theater nuclear forces; NATO defense; theater nuclear warfare; integrated battlefield; Soviet theater nuclear doctrine; theater nuclear modernization.

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

This memorandum examines the nature of the Soviet theater nuclear force improvements, the role nuclear weapons play in Soviet doctrine, and the implications of the Soviet theater nuclear buildup for deterrence and defense in Europe. The author concludes that the changing balance of theater nuclear capabilities has resulted in a devaluation of the Western nuclear deterrent, a decline in Western self-confidence, and increase in the vulnerability of the West's nuclear forces and critical command, control and supply nodes. In response, the author contends that the West must shift the emphasis of its nuclear capabilities from short-

DD FORM 1 JAN 73 1473 EDITION OF 1 NOV 65 IS OBSOLETE

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

range, battlefield systems to long-range, Eurostrategic systems, modernize its short-range systems through the introduction of reduced blast/enhanced radiation weapons, and optimize its training, doctrine, force structures, and force dispositions for operations in a nuclear as well as conventional and chemical environments.

END

DATE
FILMED

1-82

DTIC